

Journal of Entrepreneurship & Project Management

ISSN Online: 2616-8464

 **Stratford**
Peer Reviewed Journals & books

Adequate Budgetary Allocation and Infrastructural Projects Implementation in Shenzhen City Projects in China

**He Hongzhong Yang, Wei Dongming Alajmi & Cai Weihua
Mustafa**

ISSN: 2616-8464

Adequate Budgetary Allocation and Infrastructural Projects Implementation in Shenzhen City Projects, China

^{1*}He Hongzhong Yang, ²Wei Dongming Alajmi & ³Cai Weihua Mustafa
^{1,2,3} SiChuan University

*Email of the corresponding author: heyanghongzhong@gmail.com

How to cite this article: Yang, H. H., Alajmi, W. D., & Mustafa, C. W. (2023). Adequate Budgetary Allocation and Infrastructural Projects Implementation in Shenzhen City Projects, China. *Journal of Entrepreneurship & Project Management*, 7(5), 12-20. <https://doi.org/10.53819/81018102t5194>

Abstract

Adequate budgetary allocation plays a crucial role in facilitating the successful implementation of infrastructural projects. It ensures that sufficient funds are allocated to meet the various needs of the projects, including construction, materials, and labor costs. With adequate budgetary allocation, projects can be completed on time and within the planned scope, minimizing delays and cost overruns. It also allows for the incorporation of high-quality materials and technologies, ensuring the longevity and functionality of the infrastructure. Furthermore, adequate budgetary allocation enables governments and organizations to prioritize and invest in critical sectors such as transportation, water supply, energy, and communication, thereby fostering economic growth and improving the quality of life for communities. The study utilized the descriptive research design. The target population was 25 projects in Shenzhen City, China. The study did sampling of 20 respondents that were selected from the target population of 25 projects in Shenzhen City, China. Questionnaires were used to collect the data. The study concluded that adequate budgetary allocation has allowed Shenzhen to undertake numerous large-scale projects, including the development of a modern transportation network. The infrastructural projects have significantly improved the quality of life for Shenzhen's residents. Adequate budgetary allocation has allowed for the construction of residential areas with modern amenities, parks, and recreational facilities. The implementation of infrastructural projects has attracted investment and stimulated economic growth in Shenzhen. The study recommended that to ensure efficient implementation and management of infrastructural projects, Shenzhen should actively foster public-private partnerships (PPPs). While investing in infrastructure, Shenzhen should prioritize inclusivity and equity. This involves considering the needs of all citizens, including vulnerable groups and marginalized communities, in the planning and implementation of infrastructural projects.

Keywords: *Budgetary Allocation, Infrastructural Projects Implementation, China*

<https://doi.org/10.53819/81018102t5194>

1.0 Background of the Study

The effect of adequate budgetary allocation and infrastructural projects implementation in Shenzhen City, China, has been profound and transformative, catapulting the city into a major economic and technological hub (Wu, Jin, Wang & Feng, 2022). With a strong commitment to investing in infrastructure, Shenzhen has experienced significant growth, improved connectivity, enhanced living standards, and attracted both domestic and international investment. One notable effect of adequate budgetary allocation has been the development of a comprehensive transportation network. Shenzhen's metro system, which has expanded rapidly in recent years, has revolutionized transportation within the city. It has greatly improved the efficiency of daily commutes, reduced traffic congestion, and provided convenient access to various parts of the city (Xu, Zayed & Niu, 2020). The implementation of infrastructure projects, such as the Shenzhen-Hong Kong-Macau Bridge, has further enhanced connectivity between Shenzhen and other important regions, facilitating the movement of people, goods, and ideas. The investment in infrastructural projects has also played a significant role in attracting businesses and driving economic growth in Shenzhen. The city's focus on high-tech industrial parks, such as the Shenzhen High-Tech Industrial Park (SHIP) and the Shenzhen Software Park, has created a vibrant ecosystem for technological innovation (Ahmad, 2021). These parks have become magnets for both domestic and international companies, fostering collaboration and knowledge exchange. The development of modern office complexes, research facilities, and logistics centers has provided the necessary infrastructure for businesses to thrive and has boosted Shenzhen's reputation as a global leader in technology and innovation.

The adequate budgetary allocation and implementation of infrastructural projects have led to improved quality of life for Shenzhen's residents (Dai, Tong & Chu, 2023). The construction of modern residential areas with enhanced amenities, green spaces, and recreational facilities has contributed to a more livable and sustainable urban environment. The expansion and upgrades of the Shenzhen Bao'an International Airport have not only facilitated travel but also stimulated tourism and business opportunities. Shenzhen's investment in infrastructure has created a dynamic and cosmopolitan city that offers a high standard of living for its residents. Adequate budgetary allocation and infrastructural projects implementation can be seen in the economic indicators of Shenzhen. Zhang, Rong, Bakhtawar, Tariq and Zayed (2021) noted that the city has experienced remarkable GDP growth, with its economy expanding at a rapid pace. This growth has been driven by investments in infrastructure, which have attracted businesses and fueled economic activity. The development of modern transportation and logistics networks has enhanced Shenzhen's position as a major trading and manufacturing hub, facilitating the movement of goods and contributing to its robust export-oriented economy. Moreover, the implementation of infrastructural projects has contributed to job creation and employment opportunities in Shenzhen (Ng, Koksal, Wong & Tang, 2022). The construction and operation of these projects have generated a significant number of jobs, both directly and indirectly, providing livelihoods for a diverse workforce. The development of high-tech industrial parks has also created a favorable environment for entrepreneurship and innovation, fostering the growth of startups and nurturing a vibrant business ecosystem.

<https://doi.org/10.53819/81018102t5194>

In addition to the economic benefits, adequate budgetary allocation and infrastructural projects can be observed in the social and cultural development of Shenzhen. The city's investment in cultural and educational facilities has enriched the cultural landscape, providing residents with access to museums, galleries, libraries, and educational institutions. Wu, Chen and Zhang (2022) mentioned that the construction of public spaces, parks, and recreational facilities has enhanced the well-being and quality of life of Shenzhen's residents, promoting a healthy and active lifestyle. The implementation of infrastructural projects has contributed to the sustainable development of Shenzhen. The city has been proactive in integrating green and sustainable practices into its infrastructural projects. The emphasis on energy-efficient buildings, renewable energy sources, and environmentally friendly transportation systems has helped reduce the city's carbon footprint and mitigate environmental impact. Shenzhen's commitment to sustainability has positioned it as a leader in green urban development, setting an example for other cities in China and beyond. The adequate budgetary allocation and infrastructural projects implementation in Shenzhen is not without challenges and potential problems (Xian, Gong, Lu, Wu & Ouyang, 2023). Cost management and financial sustainability can be a significant concern, as large-scale projects require substantial investments. Effective financial planning, transparent procurement processes, and rigorous project oversight are essential to ensure that projects are delivered within budget and financial resources are managed efficiently.

The implementation of infrastructural projects can have environmental implications. Construction activities, increased energy consumption, and transportation infrastructure expansion can contribute to pollution and habitat loss. Kumara and Gopiprasad (2019) reported that it is crucial for Shenzhen to prioritize sustainable development practices, such as green design principles, energy efficiency, and environmental impact assessments, to minimize the negative environmental effects of infrastructural development. There is a challenge of ensuring social equity and addressing potential displacement concerns. As Shenzhen undergoes rapid development, there is a risk of marginalized communities being adversely affected, such as through forced evictions or reduced access to public services. To mitigate this, Shenzhen needs to prioritize inclusive development, conduct comprehensive social impact assessments, engage local communities in decision-making processes, and provide affordable housing and social amenities for affected communities. The adequate budgetary allocation and infrastructural projects implementation in Shenzhen City, China, has been transformative, driving economic growth, technological innovation, and improved quality of life (Nan, 2020). The investment in infrastructure has facilitated connectivity, attracted investment, stimulated economic activity, and created employment opportunities. It has also enhanced the livability and sustainability of the city. However, challenges such as cost management, environmental impact, and social equity need to be addressed to ensure that the benefits of infrastructure development are maximized and shared equitably. With careful planning and sustainable practices, Shenzhen can continue to thrive as a model city for infrastructural development and urban transformation.

2.0 Literature Review

O'Hagan (2020) conducted research to look at three Canadian water towers those in Fredericton, Winnipeg, and Niagara Falls to see how funding decisions affected the implementation of monitoring and evaluation on projects including the surrounding natural environment. The

<https://doi.org/10.53819/81018102t5194>

research population consisted of 180 individuals who were selected at random from national and county government ministries, departments, and agencies; the research used a descriptive cross-sectional research methodology. The sample size for this research was planned to be 90 people drawn at random from the demographic of interest. Respondents were selected using a probability and non-probability stratified random sampling methodology from the categories of national government and relevant county administrations. An online, pre-formatted questionnaire served as the data collection instrument. SPSS Ver. 22 was used to generate descriptive statistics like frequency distributions and percentages, as well as infer causal relationships and perform multiple regressions. The research concluded that financial allocation is substantially associated to the appraisal and monitoring of nature-based programmes in Canadian water treatment facilities. The research concludes that Canada's water towers should prioritize funding for its initiatives. In addition, additional funding should come from other places to help with water supplies. In addition, the research suggests allocating the money effectively to guarantee the objectives are met.

Phan, Tran, Le, Nguyen, Pervan and Tran (2020) conducted study on the effects of projects funding on their performance in Vietnam, Construction of the Ho Chi Minh City–Long Thanh–Dau Giay Motorway in Vietnam has been used as a case study, because it is representative of all projects with problems like those found in typical projects of this study's interest. The time it takes to complete such projects is sometimes delayed due to issues with funding and technical design, both of which are frequent in Vietnam. The study's overarching goal was to analyze how different financing levels affected the output of different initiatives. The research independent variables included project cost estimation, project technical design, and the project funding policy applicable in Vietnam that influences the project budgeting; on the other hand, the research dependent variable was project performance, which was measured in terms of the time it took to implement the project. There were two subsets of the population who were intended to get this information: those who were in charge of planning and financing the initiatives, and those who oversaw their actual execution. Information was gathered using a combination of a custom-made questionnaire, reviews of already-existing papers, and in-person interviews. According to the findings, both the cost estimate and the technical design have a detrimental impact on the projects' financing policy and the projected implementation time.

Khattak and Mustafa (2019) noted that numerous problems, such as pseudoscience, corruption, project failure, expense overruns, and eventual project abandonment, have arisen over the course of project execution. This has kept many emerging nations stuck in economic stagnation. The key to a successful project implementation is including the right people and using the right procedures. The study's primary emphasis was on how better project management may boost Pakistan's growing infrastructure. According to the findings, infrastructure development would benefit from a better execution of projects since they would no longer be subject to abandonment, failure, corruption, delays, or quackery. An effective project implementation, according to this study's findings, will boost national infrastructural development by ensuring long-lasting and high-quality infrastructure, boosting serviceability and sustainability, enhancing value through transparent project execution, ensuring compliance with all necessary processes, and increasing productivity in construction activities. The study's findings support the need for expert management of construction projects and for letting each phase of a civil engineering endeavor run its course without interference.

<https://doi.org/10.53819/81018102t5194>

Lam and Yang (2020) study reported that little is known about the specific mechanisms, but the development of punctuated equilibrium theory (PET) makes general reference to the bureaucratic procedures that regulate budgetary decision-making and makes reasonable assumptions about the influence these procedures have on the dynamic of resource allocation. The need to "examine the processes that result in friction more closely" has arisen as a result. Governments' fiscal strategy decisions are analyzed for their effects on budgetary output patterns. Capital expenditures, restricted funds, and entitlement spending all show significantly different budgetary output patterns, indicating the impact of fiscal management on resource allocation choices. More importantly, we provide empirical evidence linking expenditure patterns with the expansion of Hong Kong's democratic institutions. We identified evidence linking democratization to more institutional frictions and, by extension, bigger budgetary output punctuations by analyzing legislative filibuster instances involving capital projects.

Alajmi and Ahmed Memon (2022) conducted study and argued that there is a correlation between the amount of participation of construction experts in the macro-level budgeting process and the poor execution of publicly sponsored infrastructure projects in Turkey, according to researchers. The purpose of this research is to provide quantitative evidence for this claim, which is currently unsupported by evidence. This was accomplished by identifying sixteen (16) fundamental budgeting and procurement procedures in the literature. Public sector accountants and economists in Antalya town participated in the research as well as architects, quantity surveyors, builders, town planners, estate surveyors, civil, mechanical, and electrical engineers. The selection of Antalya as the study's location was rationalized by the city's reliance for government funding for its infrastructure. Percentages and means were used to analyze the data. According to the research, pre-budgetary process activities, such as technical and cost appraisal of infrastructure projects and review and approval of infrastructure project budgets, are only trending upward. Inadequate professional engagement in the budgeting process for infrastructure development in Turkey also led to a lack of competent technical appraisal and cost assessment for the bulk of the projects allocated for implementation. One may argue that this is a major hurdle for public infrastructure projects in Turkey. The research highlights critical areas in which public policymakers should make use of the expertise of construction industry experts in order to create a practical spending plan for expanding the country's ageing infrastructure.

3.0 Research Methodology

The study utilized the descriptive research design. The target population was 25 projects in Shenzhen City, China. The study did sampling of 20 respondents that were selected from the target population of 25 projects in Shenzhen City, China. Questionnaires were used to collect the data.

4.0 Research Findings and Discussion

4.1 Correlation Analysis

<https://doi.org/10.53819/81018102t5194>

Table 1: Correlation Analysis

		Projects Implementation	Budgetary Allocation
Projects Implementation	Pearson Correlation	1.000	
	Sig. (2-tailed)		
Budgetary Allocation	Pearson Correlation	.204 **	
	Sig. (2-tailed)	0.000	0.000

The correlation results from Table 1 show that the budgetary allocation was positively and significantly associated with infrastructural projects implementation ($r=.204$, $p=.000$). This concurs with Phan, Tran, Le, Nguyen, Pervan and Tran (2020) who noted that both the cost estimate and the technical design have a detrimental impact on the projects' financing policy and the projected implementation time.

4.2 Regression Analysis

The section consists of model fitness, analysis of variance and regression of coefficient. The findings on Table 2 show the model fitness

Table 2: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.204a	0.287	0.254	0.0000765

The results from Table 2 indicate that adequate budgetary allocation was discovered to be satisfactory in explaining the infrastructural projects implementation among the projects in Shenzhen City, China. It was supported by the coefficient of determination, R^2 of 0.287. It shows that budgetary allocation explain 28.7% of the variations in the infrastructural Projects Implementation among the projects in Shenzhen City, China.

Table 3: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.07	1	5.07	17.48	.000b
	Residual	7.24	25	0.290		
	Total	12.31	24			

<https://doi.org/10.53819/81018102t5194>

The result in Table 3 shows that the overall model was statistically significant. The results show that infrastructural projects implementation is a good predictor in explaining the budgetary allocation among the projects in Shenzhen City, China. This was supported by an F statistic of 17.48 and the reported p-value of 0.000 which was less than the conventional probability significance level of 0.05.

Table 4: Regression of Coefficient

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.663	0.120		5.525	0.079
Budgetary Allocation	0.881	0.243	0.676	3.626	0.038

According to the results in Table 4, it was noted that adequate budgetary allocation was positively and significantly related to infrastructural projects implementation ($\beta=0.881$, $p=0.038$). This was supported by a calculated t-statistic of 3.626 that is larger than the critical t-statistic of 1.96. The results imply that when the rate of budgetary allocation improves by one unit, the infrastructural projects implementation in Shenzhen City, China will increase by 0.881 units while other factors that influence the infrastructural projects implementation remain constant. Alajmi and Ahmed Memon (2022) mentioned that pre-budgetary process activities, such as technical and cost appraisal of infrastructure projects and review and approval of infrastructure project budgets, are only trending upward. Adequate budgetary allocation is essential for successful infrastructural projects, but ensuring effective cost management and long-term financial sustainability can be a significant challenge.

5.0 Conclusion

The effect of adequate budgetary allocation and infrastructural projects implementation in Shenzhen City, China, has been profound and transformative. The city's commitment to investing in its infrastructure has resulted in significant economic growth, improved quality of life for its residents, and enhanced connectivity with other regions. The adequate budgetary allocation has allowed Shenzhen to undertake numerous large-scale projects, including the development of a modern transportation network. The construction of an extensive metro system has improved the efficiency of daily commutes, reduced traffic congestion, and enhanced accessibility within the city. Additionally, the Shenzhen-Hong Kong-Macau Bridge has bolstered connectivity and facilitated the movement of people and goods between these important regions, further boosting trade and economic activity.

The implementation of infrastructural projects has attracted investment and stimulated economic growth in Shenzhen. The city's focus on high-tech industrial parks and innovation has made it a hub for technological advancements, attracting both domestic and international businesses. The development of these parks, coupled with the construction of modern office complexes and logistics centers, has created a favorable environment for companies to thrive and has contributed

<https://doi.org/10.53819/81018102t5194>

to Shenzhen's reputation as a global leader in technology and innovation. The infrastructural projects have significantly improved the quality of life for Shenzhen's residents. Adequate budgetary allocation has allowed for the construction of residential areas with modern amenities, parks, and recreational facilities. The expansion and upgrades of the Shenzhen Bao'an International Airport have facilitated travel and connectivity for both business and leisure purposes. These developments have not only enhanced the livability of the city but have also attracted a skilled workforce and fostered a vibrant and dynamic urban environment.

6.0 Recommendations

The study recommended that as Shenzhen continues to develop its infrastructure, it is crucial to prioritize sustainability and incorporate smart technologies. This includes investing in energy-efficient buildings, promoting renewable energy sources, and implementing intelligent transportation systems. By integrating sustainable practices into infrastructural projects, Shenzhen can reduce its carbon footprint, mitigate environmental impact, and create a more livable and resilient city. To ensure efficient implementation and management of infrastructural projects, Shenzhen should actively foster public-private partnerships (PPPs). Collaborating with private companies can bring in additional expertise, funding, and innovation. By leveraging the strengths of both the public and private sectors, Shenzhen can accelerate project delivery, optimize resource allocation, and enhance the quality of infrastructure. Effective governance and transparent regulations are essential for successful PPPs, ensuring accountability, risk-sharing, and fair competition. While investing in infrastructure, Shenzhen should prioritize inclusivity and equity. This involves considering the needs of all citizens, including vulnerable groups and marginalized communities, in the planning and implementation of infrastructural projects. Adequate provision of affordable housing, accessible transportation, and community facilities can enhance social cohesion, bridge economic disparities, and promote a sense of belonging for all residents. Moreover, engaging local communities in decision-making processes and incorporating their feedback can lead to more sustainable and people-centric infrastructure development.

REFERENCES

- Ahmad, E. (2021). Multilevel financing of sustainable infrastructure in China—Policy options for inclusive, resilient and green growth. *Journal of Infrastructure, Policy and Development*, 5(1), 1251. <https://doi.org/10.24294/jipd.v5i1.1251>
- Alajmi, A. M., & Ahmed Memon, Z. (2022). A Review on Significant Factors Causing Delays in Turkey Construction Projects. *Smart Cities*, 5(4), 1465-1487. <https://doi.org/10.3390/smartcities5040075>
- Dai, Y., Tong, D., & Chu, J. (2023). Involuntary resettlement outcomes following the regeneration of informal communities: The case of Baishizhou urbanizing village in Shenzhen, China. *Population, Space and Place*, 29(2), 1-14. <https://doi.org/10.1002/psp.2605>
- Khattak, M. S., & Mustafa, U. (2019). Management competencies, complexities and performance in engineering infrastructure projects of Pakistan. *Engineering, Construction and*

<https://doi.org/10.53819/81018102t5194>

- Architectural Management, 26(7), 1321-1347. <https://doi.org/10.1108/ECAM-05-2017-0079>
- Kumara, H. S., & Gopiprasad, S. (2019). Rapid urbanization and infrastructure financing for mega cities: Indian and Chinese experiences. *Institute of Town Planners, India Journal*, 63-77.
- Lam, P. T., & Yang, W. (2020). Factors influencing the consideration of Public-Private Partnerships (PPP) for smart city projects: Evidence from Hong Kong. *Cities*, 99, 102606. <https://doi.org/10.1016/j.cities.2020.102606>
- Nan, F. (2020). Policy innovation on building child friendly cities in China: Evidence from four Chinese cities. *Children and Youth Services Review*, 118, 105491. <https://doi.org/10.1016/j.chilyouth.2020.105491>
- Ng, M. K., Koksai, C., Wong, C., & Tang, Y. (2022). Smart and sustainable development from a Spatial planning perspective: The case of Shenzhen and Greater Manchester. *Sustainability*, 14(6), 3509. <https://doi.org/10.3390/su14063509>
- O'Hagan, M. (2020). Beyond the Barbed Wire: POW Labour Projects in Canada during the Second World War (Doctoral dissertation, The University of Western Ontario (Canada)).
- Phan, T. T. H., Tran, H. X., Le, T. T., Nguyen, N., Pervan, S., & Tran, M. D. (2020). The relationship between sustainable development practices and financial performance: A case study of textile firms in Vietnam. *Sustainability*, 12(15), 5930. <https://doi.org/10.3390/su12155930>
- Wu, J., Jin, X., Wang, H., & Feng, Z. (2022). Evaluating the supply-demand balance of cultural ecosystem services with budget expectation in Shenzhen, China. *Ecological Indicators*, 142, 109165. <https://doi.org/10.1016/j.ecolind.2022.109165>
- Wu, X., Chen, M., & Zhang, Y. (2022). Evaluation of the open space performance for the mass fitness activities in an urban park a case study of Lixiang Park in Shenzhen City. *International Review for Spatial Planning and Sustainable Development*, 10(2), 200-218. https://doi.org/10.14246/irspsd.10.2_200
- Xian, C., Gong, C., Lu, F., Wu, H., & Ouyang, Z. (2023). The evaluation of greenhouse gas emissions from sewage treatment with urbanization: Understanding the opportunities and challenges for climate change mitigation in China's low-carbon pilot city, Shenzhen. *Science of the Total Environment*, 855, 158629. <https://doi.org/10.1016/j.scitotenv.2022.158629>
- Xu, Z., Zayed, T., & Niu, Y. (2020). Comparative analysis of modular construction practices in mainland China, Hong Kong and Singapore. *Journal of Cleaner Production*, 245, 118861. <https://doi.org/10.1016/j.jclepro.2019.118861>
- Zhang, S., Rong, X., Bakhtawar, B., Tariq, S., & Zayed, T. (2021). Assessment of feasibility, challenges, and critical success factors of MiC projects in Hong Kong. *Journal of Architectural Engineering*, 27(1), 04020047. [https://doi.org/10.1061/\(ASCE\)AE.1943-5568.0000452](https://doi.org/10.1061/(ASCE)AE.1943-5568.0000452)

<https://doi.org/10.53819/81018102t5194>